

CLAIMS

What is claimed is:

1. In combination, a coolant sensor and connection port for selectively sealing an automotive cooling system,
the connection port having an inner portion fluidly connected to a cooling system fluid channel and an open outer portion for receiving the coolant sensor, the inner portion having a first diameter and the outer portion having a second diameter, and a bleed channel fluidly connected to the outer portion, and
the coolant sensor adapted for insertion into the connection port and retention in a first position and a second position, having a first portion forming a seal between the fluid channel and the connection port in the first position, and a second portion forming a seal at the outer portion of the connection port,
wherein the bleed channel is fluidly connected to the outer portion of the connection port between the first and second portions of the coolant sensor in the first position, and is fluidly connected to the cooling system fluid channel with the coolant sensor in the second position.
2. The coolant sensor and connection port of claim 1, wherein the first portion comprises an o-ring interposed between the coolant sensor and the connection port.
3. The coolant sensor and connection port of claim 2, wherein the o-ring is retained in a groove formed on an outer surface of the first portion of the coolant sensor.
4. The coolant sensor and connection port of claim 3, wherein the second portion comprises an o-ring interposed between the coolant sensor and the connection port.
5. The coolant sensor and connection port of claim 4, wherein the second diameter is greater than the first diameter.
6. The coolant sensor and connection port of claim 1, wherein the second portion comprises an o-ring interposed between the coolant sensor and the connection port.

7. The coolant sensor and connection port of claim 6, wherein the second diameter is greater than the first diameter.

8. The coolant sensor and connection port of claim 1, wherein the coolant sensor is retained in the first position and the second position by a horseshoe clip selectively inserted through apertures in the outer portion of the connection port.

9. The coolant sensor and connection port of claim 1, wherein the coolant sensor is retained in the first position by a bayonet mount.

10. The coolant sensor and connection port of claim 9, wherein the coolant sensor is adapted for movement from the first position to the second position by the bayonet mount.

11. A combination sensor and bleed mechanism for a fluid handling system comprising:
an access conduit fluidly connected between the fluid handling system and the atmosphere and including a main channel and a bleed channel;
a sensor assembly adapted for insertion into the access conduit and comprising a sensor body having a first end and a second end, the first end housing a sensing element and the second end comprising an interface in communication with the sensing element through the sensor body, the sensor body further having a first section proximate the first end and a second section longitudinally spaced from the first section;
a sealing element adapted to form a seal between the sensor assembly and the access conduit; and
a retention element,
wherein the retention element is adapted to secure the sensor assembly in the access conduit in a first position sealing the access conduit from the fluid handling system and in a second position wherein the bleed channel is fluidly connected with the fluid handling system.

12. The mechanism of claim 11, wherein the retention element comprises longitudinally spaced first and second retention apertures in the main channel and a clip member adapted to engage one of the first and second retention apertures to secure the sensor assembly in the access conduit.
13. The mechanism of claim 12, wherein the clip is adapted to engage the sensor assembly and the first retention aperture with the sensor assembly in the first position and the second retention aperture with the sensor assembly in the second position.
14. The mechanism of claim 11, wherein the sealing element is adapted to form a seal between the access conduit and the first section of the sensor body with the sensor assembly in the first position.
15. The mechanism of claim 14, further comprising a second sealing element adapted to form a seal between the access conduit and the second section of the sensor body with the sensor assembly in the first position.
16. The mechanism of claim 14, further comprising a second sealing element adapted to form a seal between the access conduit and the second section of the sensor body with the sensor assembly in the second position.
17. The mechanism of claim 14, wherein the first section of the sensor body has a first diameter and the second section of the sensor body has a second diameter greater than the first diameter.
18. The mechanism of claim 14, wherein the main channel includes an inner portion having a first diameter and an outer portion having a second diameter greater than the first diameter.
19. The mechanism of claim 18, wherein the bleed channel is fluidly connected to the main channel at the outer portion.